

Supplementary Material: Results of the Binary Logistic Regression – SPSS output

To additionally approve our percentual calculations, we conducted a binary logistic regression in SPSS. We adapted our dataset and added the value “first”, which could be 0 or one, depending on if the perceived difference was found first or not.

		Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1 ^a	size(1)	,021	,102	,040	1	,841	1,021	,836	1,246
	position(1)	-,112	,117	,916	1	,338	,894	,710	1,125
	whitespace(1)	-,096	,126	,577	1	,447	,908	,709	1,164
	color(1)	,764	,105	52,874	1	<,001	2,146	1,747	2,637
	edgelenlength			56,622	2	<,001			
	edgelenlength(1)	-,200	,117	2,902	1	,088	,819	,651	1,031
	edgelenlength(2)	,856	,156	29,982	1	<,001	2,354	1,733	3,199
	Constant	-1,256	,143	77,556	1	<,001	,285		

a. Variable(s) entered on step 1: size, position, whitespace, color, edgelenlength.

SPSS output for binary logistic regression for first seen differences

The table above shows in the “Sig.” column, which factors are significant and which not. Every p-value below 0.05 is seen as significant. Furthermore, the column “Exp(B)” shows us the Odds Ratio, which makes a statement about the extent to which the presence or absence of one characteristic is related to the presence or absence of another characteristic and how strong this relationship is.

- Odds > 1 indicate that it is more likely that the event will occur than that it will not occur.
- Odds of 1 indicate that the occurrence and non-occurrence of the event are equally likely.
- Odds < 1 indicate that it is more likely that the event will not occur than that it will occur [25].

In our example the significant values are color =1 (which means for our data “uniform surrounding”) with the p-value: <0.001 and the Exp(B) value 2.145 and edge length=2 (which means for our data “long edges”) with the p-value: <0.001 and the Exp(B) value 2.345. To summarize, it is more likely that a difference is perceived first when the difference has a uniform surrounding or when the edge is long. Those values are comparable with our previous percentage calculations and confirm the statement.